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ELEVATED, SPECIFIC TEMPORAL LOBE SIGNS IN A POPULATION ENGAGED IN PSYCHIC STUDIES [1, 2]

M. A. PERSINGER AND SUSAN D. FISHER

Laurentian University

Summary.—We tested the hypothesis that a special population of people who maintain exotic beliefs and report frequent subjective psi experiences should display more frequent temporal lobe signs and symptoms. Clusters of items, that reflect various temporal lobe factors for 20 women who were actively (>1 year) involved with a local psychic and spiritual development group, were compared to items for an age-matched reference group ($n = 61$). *T*-scores for the reference group did not differ from those of the normal population. Whereas the psychic group did not differ from the reference group on various control and psychiatric measures, mean *T*-scores on clusters that infer complex partial epileptic signs (specifically a sense of presence, olfactory experiences, and intense meaning) ranged between 65 and 70. Group affiliation explained 22 to 50% of the variance for each of these variables; with discriminant analysis, they correctly classified 95% of both groups of participants.

Neppe (1983) and Persinger (1983) have suggested that enhanced activity within the deep temporal lobes should be associated with more frequent subjective psi experiences. Persinger and Makarec found (1987) reliable positive correlations between the report of such experiences and temporal lobe signs. Other studies have suggested that psi experiences affect beliefs in these phenomena (Persinger & Valliant, 1985). If this relationship is generalizable, then people who frequently report these experiences and who endorse exotic beliefs (e.g., belief in telepathy, time-travel, reincarnation) should display significantly higher incidence of temporal lobe signs.

To test this hypothesis, a total of 20 women who regularly participated (>1 year) in a local "psychic group" at the time of testing completed the Personal Philosophy Inventory; their ages ranged from 24 to 65 yr. ($M = 40$, $SD = 10$). Scores from our primary data base for all university women ($n = 61$) who reported being the same ages ($M = 38$ yr., $SD = 6$) were obtained. These data had been collected over a 10-yr. period. Chi-squared analyses ($df = 2$, 5.53, 2.97, respectively) indicated no significant group differences for marital status (9% single, 73% married, 19% divorced/widowed) or religious denomination (67% Catholic, 15% Protestant, and 19% other [primarily exotic]).

All analyses were completed by SPSS^x software on a Vax 785 computer. *T*-scores for each cluster of the inventory were determined for the reference group and for the psychic group to facilitate comparison with our general population. One-way analyses of variance were completed for each of the major clusters: control, lie, complex partial epileptic signs (Persinger & Makarec, 1987), interictal-like behaviors (e.g., "After writing prose or poetry I feel better," "I have been known to walk in my sleep"), frequent correlates of temporal lobe lability (e.g., "After my religious conversion I felt full of energy" or "During important conversations I stick to the topic more than most people"), religious beliefs, and exotic beliefs [samples given by Persinger and Makarec (1990)]. The means and standard deviations for the reference and psychic groups on each of the major clusters were: for the control cluster 53 ± 9 and 52 ± 11 ($F = 0.33$, $p > .05$); for

[1]Please send correspondence to M. A. Persinger, Neuroscience Laboratory, Department of Psychology, Sudbury, Ontario, P3E 2C6 Canada.
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lie: 47 ± 9 and 44 ± 14 ($F = 1\ 65$, $p > .05$); for complex partial epileptic signs 49 ± 10 and 69 ± 11 ($F = 62.19$, $p < .001$; 44% of variance); for interictal-like indicators 49 ± 9 and 64 ± 12 ($F = 35.11$, $p < .001$; 31% variance); for frequently correlated temporal lobe signs 50 ± 10 and 59 ± 12 ($F = 12.10$, $p < .001$; 15% of variance); for exotic beliefs 52 ± 10 and 71 ± 5 ($F = 67.40$, $p < .001$; 44% variance); and for religious beliefs 51 ± 11 and 52 ± 10 ($F = 0.33$, $p > .05$).

Group means (all *SD*s between 9 and 12) for reference and psychic groups on the various subclusters were for fear 52 and 49, egotism 47 and 47, rare 50 and 54, perseveration 49 and 49, limbic motor movements 52 and 56, automatic behaviors 47 and 53, instructional compliance 51 and 50, personal writing 48 and 57, intense meaning 52 and 66, anomalous visual sensations 51 and 68, psi experiences 48 and 63, depersonalization 48 and 56, auditory-vestibular experiences 49 and 59, a sense of presence 50 and 71, and olfactory experiences 50 and 65. There were no group differences for the clusters of fear through instructional compliance. Significant (*F*s between 9.53 and 76.77, $p < .001$) increases in clusters, personal writing through olfaction, were noted for the psychic group.

Discriminant analyses (Wilks lambda = 0.32; $\chi^2 = 86.65$) indicated that the sense of a presence, exotic beliefs, personal writing, depersonalization, and olfactory experiences correctly classified 95% of the reference and psychic groups. Multiple regression indicated that the single most powerful predictor variable was the sense of presence ($MR = 0.70$); the other significant variables in the equation were olfactory and personal writing experiences ($MR = 0.76$; $F_{3,77} = 35.50$, $p < .001$). All partial regression coefficients were positive. For comparison, the major clusters from the Personal Philosophy Inventory were used as predictors. Only complex partial epileptic signs entered; it showed a positive relationship for affiliation with the psychic group ($MR = 0.66$; $F = 62.19$, $p < .001$); the other two major temporal lobe and control clusters did not enter. For the reference group, the complex partial epileptic signs were significantly correlated with exotic (0.45, $p < .001$) but not religious (0.20, $p > .05$) beliefs; for the psychic group these complex signs were not significantly correlated with either religious (0.32) or exotic (−0.01) beliefs.

Middle-aged women who pursue psychic development and who report frequent psi experiences display particular enhancement of phenomenological details that imply enhanced amygdaloid-hippocampal activity. These results support the hypotheses that subjective psychic experiences and exotic beliefs are associated with enhanced report of temporal lobe signs.

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